

## CLAIMS

1. A method for controlling the execution of multiple tasks in a  
2 processing circuit including several modules, comprising the steps of:  
determining temperature-associated information at various areas of the  
4 processing circuit; and  
executing the tasks on said plurality of processing modules responsive to  
6 said temperature-associated information to prevent problems associated with  
one or more areas exceeding a temperature threshold.
2. The method of claim 1 wherein said determining step comprises  
2 the step of monitoring operations executed by said modules.
3. The method of claim 1 wherein said determining step comprises  
2 the step of calculating power dissipation information at various locations in said  
processing circuit.
4. The method of claim 1 wherein said determining step comprises  
2 the step of calculating a current temperature at various locations in said  
processing circuit.
5. The method of claim 1 wherein said determining step comprises  
2 the steps of:  
generating a task allocation scenario;  
4 estimating temperature-associated information for various locations in the  
processing circuit;  
6 computing the temperature associated with said activities.
6. The method of claim 5 wherein said step of generating a task  
2 allocation scenario comprises the step of receiving a task list describing the tasks  
to be executed and a task model describing the tasks.

4           7.     The method of claim 6 wherein the task model includes initial area-specific power dissipation estimates for each task.

2           8.     A processing circuit including a plurality of processing modules for executing multiple tasks comprising:

4           circuitry for determining temperature-associated information at various areas of the processing circuit; and

6           circuitry for executing the tasks on said plurality of processing modules responsive to said temperature-associated information to prevent problems associated with one or more areas exceeding a temperature threshold.

2           9.     The processing circuit of claim 8 wherein said determining circuitry comprises circuitry for monitoring operations executed by said processing modules.

2           10.    The processing circuit of claim 8 wherein said determining circuitry comprises circuitry for calculating power dissipation information at various locations in said processing circuit.

2           11.    The processing circuit of claim 8 wherein said determining circuitry comprises circuitry for calculating a current temperature at various locations in said processing circuit.

2           12.    The processing circuit of claim 8 wherein said determining circuitry comprises circuitry for generating a task allocation scenario, estimating temperature-associated information for various locations in the processing circuit and computing the temperature associated with said activities.

2           13.    The processing circuit of claim 12 wherein said circuitry for generating a task allocation scenario comprises circuitry for receiving a task list describing the tasks to be executed and a task model describing the tasks.

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4           14.     The processing circuit of claim 13 wherein the task model includes  
initial area-specific power dissipation estimates for each task.

          15.     A mobile communications device comprising:  
2           an antenna for receiving and transmitting signals; and  
          receiver/transmitter circuitry coupled to said antenna for sending and  
4           receiving audio and data signals, said receiver/transmitter circuitry including a  
processing circuit comprising:  
6                 circuitry for determining temperature-associated information at  
various areas of the processing circuit; and  
8                 circuitry for executing the tasks on said plurality of processing  
modules responsive to said temperature-associated information to prevent  
10           problems associated with one or more areas exceeding a temperature threshold.

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